

I claim:

1. A vehicle control configuration comprising:
 - a hierarchical control system including an upper hierarchical level and a lower hierarchical level;
 - the upper hierarchical level communicates to the lower hierarchical level by sending downward signals;
 - the lower hierarchical level communicates to the upper hierarchical level by sending upward signals;
 - wherein the downward signals include at least one request for vehicle modification; and
 - wherein the upward signals include availabilities of the lower hierarchical level independent of the request for vehicle modification.
2. The vehicle control configuration of claim 1, wherein:
 - the upward signals include availabilities of mode of operation of the lower hierarchical level.
3. The vehicle control configuration of claim 2, wherein:
 - the downward signals include a request for mode of operation of the lower hierarchical level; and
 - the upward signals include a confirmation of the mode of operation.
4. The vehicle control configuration of claim 1, wherein:
 - the downward signals include a request for enablement; and
 - the upward signals include a confirmation of enablement.
5. The vehicle control configuration of claim 1, wherein:
 - the downward signals include vehicle state measurements of the vehicle.
6. The vehicle control configuration of claim 1, wherein:
 - the upward signals include vehicle state measurements of actuators controlled by the lower hierarchical level.

7. The vehicle control configuration of claim 1, wherein:
the upward signals include status of the lower hierarchical level independent of the current vehicle behavior.
8. A vehicle control system comprising:
 - a vehicle motion control subsystem having a control input and a control output;
 - a suspension coordinator subsystem including a subsystem input and a subsystem output;
 - wherein the vehicle motion control subsystem outputs downward signals out of the control output to the subsystem input of the suspension coordinator subsystem;
 - wherein the suspension coordinator subsystem outputs upward signals out of the subsystem output to the control input of the vehicle motion control subsystem;
 - wherein the downward signals include at least one request for vehicle modification; and
 - wherein the upward signals include availabilities of the lower hierarchical level independent of the request for vehicle modification.
9. The vehicle control system of claim 8, wherein:
the upward signals include availabilities of mode of operation of the suspension coordinator subsystem.
10. The vehicle control system of claim 9, wherein:
 - the downward signals include a request for mode of operation of the suspension coordinator subsystem; and
 - the upward signals include a confirmation of the mode of operation.
11. The vehicle control system of claim 8, wherein:
 - the downward signals include a request for enablement; and
 - the upward signals include a confirmation of enablement.

12. The vehicle control system of claim 8, wherein:
the downward signals include vehicle state measurements of the vehicle.
13. The vehicle control system of claim 8, wherein:
the upward signals include vehicle state measurements of actuators of the suspension coordinator subsystem.
14. The vehicle control system of claim 8, wherein:
the upward signals include status of actuators of the suspension coordinator subsystem independent of the current vehicle behavior.
15. A method of controlling a vehicle comprising:
providing the vehicle with a hierarchical control system including an upper hierarchical level and a lower hierarchical level;
communicating downward signals from the upper hierarchical level to the lower hierarchical level;
communicating upward signals from the lower hierarchical level to the upper hierarchical level;
wherein the downward signals include at least one request for vehicle modification; and
wherein the upward signals include availabilities of the lower hierarchical level independent of the request for vehicle modification.
16. The method of controlling a vehicle of claim 15, wherein:
the upward signals include availabilities of mode of operation of the lower hierarchical level.
17. The method of controlling a vehicle of claim 16, wherein:
the downward signals include a request for mode of operation of the lower hierarchical level; and
the upward signals include a confirmation of the mode of operation.

18. The method of controlling a vehicle of claim 15, wherein:
the downward signals include a request for enablement; and
the upward signals include a confirmation of enablement.
19. The method of controlling a vehicle of claim 15, wherein:
the upward signals include vehicle state measurements of actuators controlled by the lower hierarchical level.
20. The method of controlling a vehicle of claim 15, wherein:
the upward signals include status of the lower hierarchical level independent of the current vehicle behavior.